GenCore version 4.5


OM protein - protein search, using sw model

Run on: July 16, 2001, 18:10:40 ; Search time 37.19 Seconds
(without alignments)
1010.671 Million cell updates/sec

Title: US-09-405-504A-49
Perfect score: 3271
Sequence: 1 MLSAIYTVLAGLLFLPLLVN.....MYVPMTEDIYNAISAKTLKL 620

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 412676 seqs, 60623988 residues

Total number of hits satisfying chosen parameters: 412676

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_0601:*
1: /SIDS8/gcgdata/geneseq/geneseqp/AA1980.DAT:*
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21: /SIDS8/gcgdata/geneseq/geneseqp/AA2000.DAT:*
22: /SIDS8/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|---|---|---|---|---|---|---|
| 1 | 3271 | 100.0 | 620 | 20 | AAY14947 | Amino acid sequenc |
| 2 | 2801 | 85.6 | 620 | 20 | AAY14953 | Amino acid sequenc |
| 3 | 2573.5 | 78.7 | 623 | 20 | AAY14956 | Amino acid sequenc |
| 4 | 1672.5 | 51.1 | 619 | 20 | AAY14944 | Amino acid sequenc |
| 5 | 1672.5 | 51.1 | 619 | 20 | AAY14951 | Amino acid sequenc |
| 6 | 1517 | 46.4 | 286 | 20 | AAY14936 | Amino acid sequenc |
| 7 | 1455 | 44.5 | 690 | 21 | AAB42907 | Human ORFX ORF2671 |
| 8 | 1379 | 42.2 | 662 | 20 | AAY14935 | Amino acid sequenc |
| 9 | 1379 | 42.2 | 689 | 20 | AAY14959 | Amino acid sequenc |
| 10 | 1339.5 | 41.0 | 730 | 20 | AAY41699 | Human PRO703 prote |
| 11 | 1339.5 | 41.0 | 730 | 21 | AAB44255 | Human PRO703 (UNQ3 |
| 12 | 1339.5 | 41.0 | 730 | 21 | AAB24054 | Human PRO703 prote |
| 13 | 1339.5 | 41.0 | 730 | 22 | AAB60388 | Human fatty acid t |
| 14 | 1338.5 | 40.9 | 702 | 20 | AAY14969 | Amino acid sequenc |
| 15 | 1327.5 | 40.6 | 609 | 20 | AAY14957 | Amino acid sequenc |
| 16 | 1327.5 | 40.6 | 613 | 20 | AAY14933 | Amino acid sequenc |
| 17 | 1064 | 32.5 | 643 | 20 | AAY14943 | Amino acid sequenc |
| 18 | 1064 | 32.5 | 643 | 20 | AAY14949 | Amino acid sequenc |
| 19 | 1044.5 | 31.9 | 646 | 20 | AAY14942 | Amino acid sequenc |
| 20 | 1044.5 | 31.9 | 646 | 20 | AAY14946 | Amino acid sequenc |
| 21 | 1042.5 | 31.9 | 646 | 20 | AAY14952 | Amino acid sequenc |
| 22 | 1039.5 | 31.8 | 646 | 20 | AAY40435 | Human FATP protein |
| 23 | 1039.5 | 31.8 | 646 | 20 | AAY40436 | Human FATP1 protei |
| 24 | 1036 | 31.7 | 643 | 20 | AAY14945 | Amino acid sequenc |
| 25 | 1036 | 31.7 | 643 | 20 | AAY14958 | Amino acid sequenc |
| 26 | 1030.5 | 31.5 | 590 | 20 | AAY14960 | Partial amino acid |
| 27 | 1026.5 | 31.4 | 335 | 20 | AAY14940 | Amino acid sequenc |
| 28 | 1022.5 | 31.3 | 647 | 20 | AAY14955 | Amino acid sequenc |
| 29 | 988.5 | 30.2 | 511 | 21 | AAY71058 | Human membrane tra |
| 30 | 958 | 29.3 | 650 | 20 | AAY14962 | Amino acid sequenc |
| 31 | 954 | 29.2 | 330 | 20 | AAY14948 | Amino acid sequenc |
| 32 | 944 | 28.9 | 597 | 20 | AAY14968 | Amino acid sequenc |
| 33 | 944 | 28.9 | 597 | 20 | AAY14941 | Amino acid sequenc |
| 34 | 927.5 | 28.4 | 506 | 20 | AAY14934 | Amino acid sequenc |
| 35 | 913.5 | 27.9 | 616 | 21 | AAB42756 | Human ORFX ORF2520 |
| 36 | 913.5 | 27.9 | 643 | 20 | AAY14964 | Amino acid sequenc |
| 37 | 897 | 27.4 | 354 | 20 | AAY14950 | Amino acid sequenc |
| 38 | 874 | 26.7 | 405 | 20 | AAY14954 | Amino acid sequenc |
| 39 | 839 | 25.6 | 642 | 15 | AAR49826 | Cephalosporin C #1 |
| 40 | 785 | 24.0 | 615 | 20 | AAY14963 | Amino acid sequenc |
| 41 | 744.5 | 22.8 | 623 | 20 | AAY14967 | Amino acid sequenc |
| 42 | 512 | 15.7 | 191 | 20 | AAY14937 | Amino acid sequenc |
| 43 | 493 | 15.1 | 199 | 20 | AAY14939 | Amino acid sequenc |
| 44 | 437 | 13.4 | 213 | 20 | AAY14938 | Amino acid sequenc |
| 45 | 306.5 | 9.4 | 199 | 20 | AAY14965 | Partial amino acid |

ALIGNMENTS

RESULT 1
AAY14947
ID AAY14947 standard; protein; 620 AA.
XX
AC AAY14947;
XX
DT 26-OCT-1999 (first entry)
XX
DE Amino acid sequence of human hsFATP2.
XX
KW Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
KW fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS Homo sapiens.
XX
PN WO9936537-A2.
XX
PD 22-JUL-1999.
XX
PF 14-JAN-1999; 99WO-US00182.
XX
PR 14-JAN-1999; 99US-0232201.
PR 15-JAN-1998; 98US-0071374.
PR 20-JUL-1998; 98US-0093491.
PR 04-DEC-1998; 98US-0110941.
PR 14-JAN-1999; 99US-0232195.
PR 14-JAN-1999; 99US-0232197.
PR 14-JAN-1999; 99US-0232200.
XX
PA (MILL-) MILLENNIUM PHARM INC.
PA (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
XX

```
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00357.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Claim 64; Fig 47; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   620 AA;


  Query Match             100.0%;  Score 3271;  DB 20;  Length 620;
  Best Local Similarity   100.0%;  Pred. No. 0;
  Matches  620;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy      61 EKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHLGLRQGDCVALLMGNEPAYVWL 120
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Db      61 ekarqtphkpfllfrdetltyaqvdrrsnqvaralhdhlglrqgdcvallmgnepayvwl 120

Qy     121 WLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSIY 180
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Db     121 wlglvklgcamaclnyniraksllhcfqccgakvllvspelqaaveeilpslkkddvsiy 180

Qy     181 YVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITHQ 240
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Db     181 yvsrtsntdgidsfldkvdevstepipeswrsevtfstpalyiytsgttglpkaamithq 240

Qy     241 RIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWDD 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 riwygtgltfvsglkaddviyitlpfyhsaalligihgcivagatlalrtkfsasqfwdd 300

Qy     301 CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYE 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 crkynvtviqyigellrylcnspqkpndrdhkvrlalgnglrgdvwrqfvkrfgdiciye 360

Qy     361 FYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRVPKG 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy     421 EVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYFHDR 480
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Db     421 evgllvckitqltpfngyagakaqtekkklrdvfkkgdlyfnsgdllmvdhenfiyfhdr 480

Qy     481 VGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEFDGK 540
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Qy     541 KLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDDTAK 600
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Db     541 klfqhiadylpsyarprflriqdtieitgtfkhrkmtlveegfnpavikdalyflddtak 600

Qy     601 MYVPMTEDIYNAISAKTLKL 620
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Db     601 myvpmtediynaisaktlkl 620


RESULT   2
AAY14953
ID   AAY14953 standard; protein; 620 AA.
XX
AC   AAY14953;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of rat rnFATP2.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Rattus norvegicus.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00363.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Disclosure; Fig 59; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   620 AA;


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Db     61 eqarktphkpfllfrdetltyaqvdrrsnqvaralhdhlglrqgdcvalfmgnepayvwl 120

Qy    121 WLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSIY 180

Db    121 wlgllklgcpmaclnyniraksllhcfqccgakvllaspelheaveevlptlkkegvsvf 180

Qy    181 YVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITHQ 240

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Db    301 crkynatviqyigellrylcntpqkpndrdhkvkialgnglrgdvwrefikrfgdihiye 360

Qy    361 FYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRVPKG 420

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Qy    421 EVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYFHDR 480

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Qy    481 VGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEFDGK 540

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Qy    541 KLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDDTAK 600

Db    541 klfqhiseylpsysrprflriqdtieitgtfkhrkvtlmeegfnpsvikdtlyfmddtek 600

Qy    601 MYVPMTEDIYNAISAKTLKL 620

Db    601 tyvpmtediynaiidktlkl 620


RESULT   3
AAY14956
ID   AAY14956 standard; protein; 623 AA.
XX
AC   AAY14956;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of murine mmFATP2.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Mus sp.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00366.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Example 1; Fig 65; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   623 AA;


  Query Match             78.7%;  Score 2573.5;  DB 20;  Length 623;
  Best Local Similarity   77.4%;  Pred. No. 1.8e-243;
  Matches  482;  Conservative   54;  Mismatches   84;  Indels    3;  Gaps    3;

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Db      1 mlpvlytglaglllplllcccpyllqdvryflrlanmarrvrsyrqrrpvrtilrafl 60

Qy     61 EKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHLGLRQGDCVALLMGNEPAYVWL 120

Db     61 eqarktphkpfllfrdetltyaqvdrrsnqvaralhdqlglrqgdcvalfmgnepayvwi 120

Qy    121 WLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSIY 180

Db    121 wlgllklgcpmaclnynirakslihcfqccgakvllaspdlqeaveevlptlkkdavsvf 180

Qy    181 YVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITHQ 240

Db    181 yvsrtsntngvdtildkvdgvsaeptpeswrsevtfttpavyiytsgttglpksgtinhh 240

Qy    241 RIWYGTGLTFVSGLKADDV-IYITLPFYHSAALLIGIHGCIVAGATLAL-RTKFSASQFW 298

Db    241 rlrygtslamssgnhgqgchlyqqcpcsnsatlkiglhgcilgwgyfnlggansqasqfw 300

Qy    299 DD-CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDIC 357

Db    301 erlagnttstviqyigellrylcntpqkpndrdhkvkkalgnglrgdvwrefikrfgdih 360

Qy    358 IYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRV 417

Db    361 vyefyastegnigfvnyprkigavgranylqrkvaryelikydvekdepvrdangycikv 420

Qy    418 PKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYF 477

Db    421 pkgevgllvckitqltpfigyaggktqtekkklrdvfkkgdiyfnsgdllmidrenfvyf 480

Qy    478 HDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEF 537

Db    481 hdrvgdtfrwkgenvattevadivglvdfveevnvygvpvpghegrigmaslkikenyef 540
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Qy     538 DGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDD 597
           :|||||||||:|||||||||||||||||||||||||||||:||:|||||| |||| |||:||
Db     541 ngkklfqhiaeylpsyarprflriqdtieitgtfkhrkvtlmeegfnptvikdtlyfmdd 600

Qy     598 TAKMYVPMTEDIYNAISAKTLKL 620
             | :|||||:|||||  |||||
Db     601 aektfvpmteniynaiidktlkl 623


RESULT   4
AAY14944
ID   AAY14944 standard; Protein; 619 AA.
XX
AC   AAY14944;
XX
DT   31-MAY-2000  (first entry)
XX
DE   Amino acid sequence of human hsFATP6.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Homo sapiens.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00354.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
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PS   Examples; Fig 34; 255pp; English.
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CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   619 AA;
```

```
  Query Match           51.1%;  Score 1672.5;  DB 20;  Length 619;
  Best Local Similarity   50.7%;  Pred. No. 4.3e-155;
  Matches  315;  Conservative  116;  Mismatches  187;  Indels    3;  Gaps    3;

Qy       1 MLSAIYTVL-AGLLFLPLLVNLCCPYFFQDIGYFLKVAAVGRRVRSYGQRRPARTILRAF 59
           || :  ||| ||:: |  |  |  |||: |  : |||  :  |:: | :|    |:|  |
Db       1 mllswltvlgagmvvlhflqkllfpyfwddfwfvlkvvliiirlkkyekrgelvtvldkf 60

Qy      60 LEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHLGLRQGDCVALLMGNEPAYVW 119
           |  |:: | |||:::  :  ||  ||:||::||    :|  |::|| ||||| ||| :|
Db      61 lshakrqprkpfiiyegdiytyqdvdkrssrvahvflnhsslkkgdtvallmsnepdfvh 120

Qy     120 LWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSI 179
           :| || |||| :| || ||||: |||:| : || : |:|  :|   |||||||  :::|:
Db     121 vwfglaklgcvvaflntnirsnsllnciracgpralvvgadllgtveeilpsl-senisv 179

Qy     180 YYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITH 239
           : : : |   |: |  :|:     ||:| |        :  |||:||||||||||:|:
Db     180 wgm-kdsvpqgvislkeklstspdepvprshhvvsllkstclyiftsgttglpkaavisq 238

Qy     240 QRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWD 299
           ::  |: : :  |  | |::|||| |||:| ::|| ||:  |||  |: ||||||||
Db     239 lqvlrgsavlwafgctahdivyitlplyhssaailgisgcvelgatcvlkkkfsasqfws 298

Qy     300 DCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIY 359
           ||:||:||| |||||| ||||   ::  ::|||||||:|||:| ||||:|: |||:| :
Db     299 dckkydvtvfqyigelcrylckqskregekdhkvrlaignqirsdvwrefldrfgnikvc 358

Qy     360 EFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRVPK 419
           | ||||| :| ||||  ::||:|| |   | : |:|||||| :||||:|:| |:|: | |
Db     359 elyaatessisfmnytgrigaigrtnlfykllstfdlikydfqkdepmrneqgwcihvkk 418

Qy     420 GEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYFHD 479
           || |||: ::    || ||||    |: | | |||||||:| |:|||:: | :||:|| |
Db     419 gepgllisrvnaknpffgyagpykhtkdkllcdvfkkgdvylntgdlivqdqdnflyfwd 478

Qy     480 RVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEFDG 539
           | |||||||||||||||| :|::||:|| ||||| :  :||| ||||| :| |   |
Db     479 rtgdtfrwkgenvattevadvigmldfiqeanvygvaisgyegragmasiilkpntsldl 538

Qy     540 KKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDDTA 599
           :|::: :  :||:|| |||||||: :| ||||| |  |||:|||| | : |||:|:
Db     539 ekvyeqvvtflpayacprflriqekmeatgtfkllkhqlvedgfnplkiseplyfmdnlk 598

Qy     600 KMYVPMTEDIYNAISAKTLKL 620
           | || :| ::|: |    :||
Db     599 ksyvlltrelydqimlgeikl 619


RESULT   5
AAY14951
ID   AAY14951 standard; protein; 619 AA.
XX
AC   AAY14951;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of human hsFATP6.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Homo sapiens.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
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PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00361.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Claim 82; Fig 55; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   619 AA;
```

```
  Query Match             51.1%;  Score 1672.5;  DB 20;  Length 619;
  Best Local Similarity   50.7%;  Pred. No. 4.3e-155;
  Matches  315;  Conservative  116;  Mismatches  187;  Indels    3;  Gaps    3;

Qy       1 MLSAIYTVL-AGLLFLPLLVNLCCPYFFQDIGYFLKVAAVGRRVRSYGQRRPARTILRAF 59
           || :  ||| ||:: |  |  |  |||: |  : |||  :  |:: | :|    |:|  |
Db       1 mllswltvlgagmvvlhflqkllfpyfwddfwfvlkvvliiirlkkyekrgelvtvldkf 60

Qy      60 LEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHLGLRQGDCVALLMGNEPAYVW 119
           |  |:: | |||::::  :  ||  ||:||::||    :|  |::|| ||||| ||| :|
Db      61 lshakrqprkpfiiyegdiytyqdvdkrssrvahvflnhsslkkgdtvallmsnepdfvh 120

Qy     120 LWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSI 179
           :| || |||| :| || |||: |||:| : || : |:|- :|   |||||||  :::|:
Db     121 vwfglaklgcvvaflntnirsnsllnciracgpralvvgadllgtveeilpsl-senisv 179

Qy     180 YYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITH 239
           : : : |   |: |  :|:     ||:| |       :  |||:||||||||||:|:
Db     180 wgm-kdsvpqgvislkeklstspdepvprshhvvsllkstclyiftsgttglpkaavisq 238

Qy     240 QRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWD 299
           ::  |: : :  |  | |::||||| |||:| ::|| ||:  |||  |: ||||||||
Db     239 lqvlrgsavlwafgctahdivyitlplyhssaailgisgcvelgatcvlkkkfsasqfws 298

Qy     300 DCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIY 359
           ||:||:||| |||||| |||   ::  ::|||||||:|||:| ||||:|: |||:| :
Db     299 dckkydvtvfqyigelcrylckqskregekdhkvrlaigngirsdvwrefldrfgnikvc 358

Qy     360 EFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRVPK 419
           | ||||| :| ||||  ::||:|| |   | : |:|||||| :||||:|:| |:|: | |
Db     359 elyaatessisfmnytgrigaigrtnlfykllstfdlikydfqkdepmrneqgwcihvkk 418

Qy     420 GEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYFHD 479
           || |||: ::    || ||||    |: | | ||||||:| |:|||:: | :||:|| |
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Db     419 gepgllisrvnaknpffgyagpykhtkdkllcdvfkkgdvylntgdlivqdqdnflyfwd 478

Qy     480 RVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEFDG 539
           | |||||||||||||||||| :|::||:|| ||||| :  :||| |||||  :|  |   |
Db     479 rtgdtfrwkgenvattevadvigmldfiqeanvygvaisgyegragmasiilkpntsldl 538

Qy     540 KKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDDTA 599
           :|::: :  :||:|| ||||||: :| |||||  |  |||:||||  | : |||:|:
Db     539 ekvyeqvvtflpayacprflriqekmeatgtfkllkhqlvedgfnplkiseplyfmdnlk 598

Qy     600 KMYVPMTEDIYNAISAKTLKL 620
           | || :| ::|: |    :||
Db     599 ksyvlltrelydqimlgeikl 619


RESULT   6
AAY14936
ID   AAY14936 standard; protein; 286 AA.
XX
AC   AAY14936;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of human hsFATP2.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Homo sapiens.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00346.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Example 1; Fig 15; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
```

```
CC   diabetes and heart disease.
XX
SQ   Sequence   286 AA;


  Query Match             46.4%;  Score 1517;  DB 20;  Length 286;
  Best Local Similarity   99.6%;  Pred. No. 2.3e-140;
  Matches  284;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy    222 YIYTSGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIV 281
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 yiytsgttglpkaamithqriwygtgltfvsglkaddviyitlpfyhsaalligihgciv 60

Qy    282 AGATLALRTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGL 341
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 agatlalrtkfsasqfwddcrkynvtviqyigellrylcnspqkpndrdhkvrlalgngl 120

Qy    342 RGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDV 401
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 rgdvwrqfvkrfgdiciyefyaategnigfmnyarkvgavgrvnylqkkiitydlikydv 180

Qy    402 EKDEPVRDENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYF 461
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 ekdepvrdengycvrvpkgevgllvckitqltpfngyagakaqtekkklrdvfkkgdlyf 240

Qy    462 NSGDLLMVDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDF 506
          ||||||||||||||||||||||||||||||||||| ||||||
Db    241 nsgdllmvdhenfiyfhdrvgdtfrwkgenvattevadivglvdf 285


RESULT   7
AAB42907
ID   AAB42907 standard; Protein; 690 AA.
XX
AC   AAB42907;
XX
DT   08-FEB-2001  (first entry)
XX
DE   Human ORFX ORF2671 polypeptide sequence SEQ ID NO:5342.
XX
KW   Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
KW   vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW   anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW   immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW   hypotensive; dermatological; immunosuppressive; antiinflammatory;
KW   antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
KW   antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW   neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW   cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW   cholesterol ester storage; systemic lupus erythematosus; infection;
KW   severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
KW   allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW   bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW   thrombosis; contraceptive.
XX
OS   Homo sapiens.
XX
PN   WO200058473-A2.
XX
PD   05-OCT-2000.
XX
PF   31-MAR-2000; 2000WO-US08621.
XX
PR   31-MAR-1999;   99US-0127607.
PR   02-APR-1999;   99US-0127636.
PR   05-APR-1999;   99US-0127728.
PR   30-MAR-2000; 2000US-0540763.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Shimkets RA,  Leach M;
XX
DR   WPI; 2000-602362/57.
DR   N-PSDB; AAC77116.
XX
PT   Novel nucleic acids and peptides derived from open reading frame X,
PT   useful for treating e.g. cancers, proliferative disorders,
PT   neurodegenerative disorders and cardiovascular disease -
XX
PS   Claim 11; Page 4518-4520; 5507pp; English.
XX
CC   AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
CC   which represent the human ORFX open reading frames 1 to 3161. The ORFX
CC   sequences have activities such as: cytostatic; hepatotropic; vulnerary;
CC   antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
CC   osteopathic; anticonvulsant; antiarthritic; immunosuppressant;
CC   immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
CC   antidiabetic; hypotensive; dermatological; immunosuppressive;
CC   antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;
CC   antithyroid; and antianaemic. The sequences can be used for determining
CC   the presence of or predisposition to, or preventing or treating
CC   pathological conditions associated with an ORFX-associated disorder. The
CC   nucleic acids can be used to express ORFX proteins in gene therapy
CC   vectors. The proteins and nucleic acids may be used to treat cancers,
CC   proliferative disorders, neurodegenerative disorders, osteoarthritis,
CC   graft vs host disease, cardiovascular disease, diabetes mellitus,
CC   hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
CC   erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
CC   bacterial or fungal infection, malaria, autoimmune disorders, asthma,
CC   allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
CC   nocturnal haemoglobinuria, antiinflammatory disease; to enhance
CC   coagulation; to inhibit thrombosis; and as a contraceptive.
XX
SQ   Sequence   690 AA;


  Query Match             44.5%;  Score 1455;  DB 21;  Length 690;
  Best Local Similarity   45.2%;  Pred. No. 1.1e-133;
  Matches  280;  Conservative  126;  Mismatches  193;  Indels   20;  Gaps    4;

Qy     11 GLLFLPLLVNLCCPYFFQDIGYFLKVAAVGRRVRSYGQRRPARTILRAFLEKARQTPHKP 70
          ||:||           |: :  |:  :| ::|    |:|  | : ||  :|| | :
Db     83 glrwlp----------adviflakilhlglkirgclsrqppdtfvdaferraraqpgra 131

Qy     71 FLLFRDE---TLTYAQVDRRSNQVARALHDHLG----LRQGDCVALLMGNEPAY--VWLW 121
            |::      ::|: ::| |: | | ||   ||    |  |:  |||:    |   : :|
Db    132 llvwtgpgagsvtfgeldaracqaawalkaelgdpaslcageptallvlasqavpalcmw 191

Qy    122 LGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSLKKDDVSIYY 181
          ||| |||| | :| : |   | |     ||:||:| |:|: ::||||| |: :::  :|
Db    192 lglaklgcptawinphgrgmplahsvlssgarvlvvdpdlresleeilpklqaenircfy 251

Qy    182 VSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLPKAAMITHQR 241
          :| || | |: :    :|   : |:|   |: :|: :|||:|||||||||||| |::||:|
Db    252 lshtsptpgvgalgaaldaapshpvpadlragitwrspalfiytsgttglpkpailther 311

Qy    242 IWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWDDC 301
          :   : :  :||  ||||:|  || ||   |::|| ||:  |||  |  ||| | |||||
Db    312 vlqmskmlslsgataddvvytvlplyhvmglvvgilgcldlgatcvlapkfstscfwddc 371

Qy    302 RKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEF 361
          |:: |||| |:|||||||| ||:| || | ||||:|||| |||  | :||| | |:|
Db    372 rqhgvtvilyvgellrylcnipqqpedrthtvrlamgnglradvwetfqqrfgpiriwev 431

Qy    362 YAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGYCVRVPKGE 421
          | :||||:| :||  : ||:|::: | : :  ::|:::|:|  |||||  |:|: |  ||
Db    432 ygstegnmglvnyvgrcgalgkmscllrmlspfelvqfdmeaaepvrdnqgfcipvglge 491

Qy    422 VGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHENFIYFHDRV 481
          |||: |:    || || | :  :|:| :|:| : ||:|:|:||:| :| | |:|| ||:
Db    492 pgllltkvvsqqpfvgyrgprelserklvrnvrqsgdvyyntgdvlamdregflyfrdrl 551

Qy    482 GDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMKENHEFDGKK 541
          |||||||||||:| ||   :  |||:|:|||||| ||  ||::|||::::     |||:|
Db    552 gdtfrwkgenvsthevegvlsqvdflqqvnvygvcvpgcegkvgmaavqlapgqtfdgek 611
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Qy     542 LFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDALYFLDDTAKM 601
           |:||:  :||:|| | |:|||| :|:| |||  |  || ||||  :: | |: ||: |:
Db     612 lyqhvrawlpayatphfiriqdamevtstfklmktrlvregfnvgivvdplfvldnraqs 671

Qy     602 YVPMTEDIYNAISAKTLKL 620
           : |:| ::| |:   | ||
Db     672 frpltaemyqavcegtwkl 690


RESULT   8
AAY14935
ID   AAY14935 standard; protein; 662 AA.
XX
AC   AAY14935;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of murine mmFATP5.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Mus musculus.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00345.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Example 1; Fig 13; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   662 AA;

  Query Match             42.2%;  Score 1379;  DB 20;  Length 662;
  Best Local Similarity   42.0%;  Pred. No. 3e-126;
  Matches  264;  Conservative  136;  Mismatches  218;  Indels   10;  Gaps    3;

Qy       2 LSAIYTVLAGLLFLPLLVNLCCPYFFQDIGYFLKVAAVGRRVRSYGQRRPARTILRAFLE 61
           ||  :   |  |  |||       :  :|: :  |:   | : |    : |  | : |
Db      36 lslvgaalt-lfllplqpppglrwlhkdvaftfkmlfyglkfrrrlnkhppetfvdaler 94

Qy      62 KARQTPHKPFLL---FRDETLTYAQVDRRSNQVARALHDHL------GLRQGDCVALLMG 112
           :|   | :  |:       ::| :|:| || | |  |   |        |    : :|
Db      95 qalawpdrvalvctgsegssitnsqldarscqaawvlkaklkdaviqntrdaaailvlps 154

Qy     113 NEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSL 172
              : : ::||| |||| :| :| : |   |||  :  || ||:| |:|| :||:|| |
Db     155 ktisalsvflglaklgcpvawinphsrgmpllhsvrssgasvlivdpdlqenleevlpkl 214

Qy     173 KKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLP 232
             :::  :|:  :| | |:::    :|   ::|:| | |: : : :||::|:||||||||
Db     215 laenihcfylghssptpgvealgasldaapsdpvpaslratikwkspaififtsgttglp 274

Qy     233 KAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKF 292
           | |:::|:|:   : :    | :||||:|  || ||:  |::|  ||:  ||| |  ||
Db     275 kpailsherviqvsnvlsfcgcraddvvydvlplyhtiglvlgflgclqvgatcvlapkf 334

Qy     293 SASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKR 352
           |||:|| :||:: |||| |:||:|||||| |::| |: | ||||:| ||| :||: | :|
Db     335 sasrfwaecrqhgvtvilyvgeilrylcnvpeqpedkihtvrlamgtglranvwknfqqr 394

Qy     353 FGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENG 412
           || | |:||| :||||:| |||    ||||| : : : :  ::|:::|:|  ||:||: |
Db     395 fgpiriwefygstegnvglmnyvghcgavgrtscilrmltpfelvqfdietaeplrdkqg 454

Qy     413 YCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHE 472
           :|: |  |: ||||: |: :  || || |::|:: :| : :| : |||||:||:| :| |
Db     455 fcipvepgkpgllltkvrknqpflgyrgsqaesnrklvanvrrvgdlyfntgdvltldqe 514

Qy     473 NFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMK 532
             | || ||:|||||||||||:| ||   :  :||::|||||| ||  ||::|||::|:
Db     515 gffyfqdrlgdtfrwkgenvstgevecvlssldfleevnvygvpvpgcegkvgmaavkla 574

Qy     533 ENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDAL 592
              |||:||:||:  :||:|| | |:||||::||| |:|  |  || |||:  :| | |
Db     575 pgktfdgqklyqhvrswlpayatphfiriqdsleitntyklvksrlvregfdvgiiadpl 634

Qy     593 YFLDDTAKMYVPMTEDIYNAISAKTLKL 620
           | ||: |: :  :  |:| |:   |  |
Db     635 yildnkaqtfrslmpdvyqavcegtwnl 662


RESULT   9
AAY14959
ID   AAY14959 standard; protein; 689 AA.
XX
AC   AAY14959;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of murine mmFATP5.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Mus sp.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
```

```
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00369.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Example 1; Fig 71; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   689 AA;

  Query Match             42.2%;  Score 1379;  DB 20;  Length 689;
  Best Local Similarity   42.0%;  Pred. No. 3.2e-126;
  Matches  264;  Conservative  136;  Mismatches  218;  Indels   10;  Gaps    3;

Qy       2 LSAIYTVLAGLLFLPLLVNLCCPYFFQDIGYFLKVAAVGRRVRSYGQRRPARTILRAFLE 61
           ||  :   |  |  |||       :  :|: :  |:   | : |    : |  | : |
Db      63 lslvgaalt-lfllplqpppglrwlhkdvaftfkmlfyglkfrrrlnkhppetfvdaler 121

Qy      62 KARQTPHKPFLL---FRDETLTYAQVDRRSNQVARALHDHL------GLRQGDCVALLMG 112
           :|   | :  |:       ::| :|:| || | |  |   |         |    : :|
Db     122 qalawpdrvalvctgsegssitnsqldarscqaawvlkaklkdaviqntrdaaailvlps 181

Qy     113 NEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEILPSL 172
              : : ::||| |||| :| :| : |   |||  :  || ||:| |:||  :||:|| |
Db     182 ktisalsvflglaklgcpvawinphsrgmpllhsvrssgasvlivdpdlqenleevlpkl 241

Qy     173 KKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGTTGLP 232
             :::  :|:  :| | |:::    :|   ::|:| | |: : : :||::|:||||||||
Db     242 laenihcfylghssptpgvealgasldaapsdpvpaslratikwkspaififtsgttglp 301

Qy     233 KAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKF 292
           | |:::|:|:   : :    | :||||:|  || ||:  |::|  ||:  |||  |  ||
Db     302 kpailsherviqvsnvlsfcgcraddvvydvlplyhtiglvlgflgclqvgatcvlapkf 361

Qy     293 SASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKR 352
           |||:|| :||:: |||| |:||:|||||| |::| |: | ||||:| ||| :||: | :|
Db     362 sasrfwaecrqhgvtvilyvgeilrylcnvpeqpedkihtvrlamgtglranvwknfqqr 421

Qy     353 FGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENG 412
           || | |:||| :||||:| |||    ||||| : : : :  ::|:::|:|  ||:||: |
Db     422 fgpiriwefygstegnvglmnyvghcgavgrtscilrmltpfelvqfdietaeplrdkqg 481

Qy     413 YCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLMVDHE 472
           :|: |  |: |||: |: :  || || |::|:: :| : :| : ||||||:||:| :| |
Db     482 fcipvepgkpgllltkvrknqpflgyrgsqaesnrklvanvrrvgdlyfntgdvltldqe 541

Qy     473 NFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMASIKMK 532
           | || ||:|||||||||||:| ||   :  :||::|||||| ||  ||::|||::|:
Db     542 gffyfqdrlgdtfrwkgenvstgevecvlssldfleevnvygvpvpgcegkvgmaavkla 601

Qy     533 ENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVIKDAL 592
                 |||:||:||:  :||:|| | |:|||||::||| |:|  |  || |||:  :| | |
Db     602 pgktfdgqklyqhvrswlpayatphfiriqdsleitntyklvksrlvregfdvgiiadpl 661

Qy     593 YFLDDTAKMYVPMTEDIYNAISAKTLKL 620
           | ||: |: :  :  |:| |:   |  |
Db     662 yildnkaqtfrslmpdvyqavcegtwnl 689


RESULT  10
AAY41699
ID   AAY41699 standard; Protein; 730 AA.
XX
AC   AAY41699;
XX
DT   07-DEC-1999  (first entry)
XX
DE   Human PRO703 protein sequence.
XX
KW   Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation;
KW   probe; blood coagulation disorder; cancer; cellular adhesion disorder;
KW   secreted protein; transmembrane protein.
XX
OS   Homo sapiens.
XX
PN   WO9946281-A2.
XX
PD   16-SEP-1999.
XX
PF   08-MAR-1999;   99WO-US05028.
XX
PR   10-MAR-1998;   98US-0077450.
PR   11-MAR-1998;   98US-0077632.
PR   11-MAR-1998;   98US-0077641.
PR   11-MAR-1998;   98US-0077649.
PR   12-MAR-1998;   98US-0077791.
PR   13-MAR-1998;   98US-0078004.
PR   17-MAR-1998;   98US-0040220.
PR   20-MAR-1998;   98US-0078886.
PR   20-MAR-1998;   98US-0078910.
PR   20-MAR-1998;   98US-0078936.
PR   20-MAR-1998;   98US-0078939.
PR   25-MAR-1998;   98US-0079294.
PR   26-MAR-1998;   98US-0079656.
PR   27-MAR-1998;   98US-0079663.
PR   27-MAR-1998;   98US-0079664.
PR   27-MAR-1998;   98US-0079689.
PR   27-MAR-1998;   98US-0079728.
PR   27-MAR-1998;   98US-0079786.
PR   30-MAR-1998;   98US-0079920.
PR   30-MAR-1998;   98US-0079923.
PR   31-MAR-1998;   98US-0080105.
PR   31-MAR-1998;   98US-0080107.
PR   31-MAR-1998;   98US-0080165.
PR   31-MAR-1998;   98US-0080194.
PR   01-APR-1998;   98US-0080327.
PR   01-APR-1998;   98US-0080328.
PR   01-APR-1998;   98US-0080333.
PR   01-APR-1998;   98US-0080334.
PR   08-APR-1998;   98US-0081049.
PR   08-APR-1998;   98US-0081070.
PR   08-APR-1998;   98US-0081071.
PR   09-APR-1998;   98US-0081195.
PR   09-APR-1998;   98US-0081203.
PR   09-APR-1998;   98US-0081229.
PR   15-APR-1998;   98US-0081817.
PR   15-APR-1998;   98US-0081838.
PR   15-APR-1998;   98US-0081952.
```

PR 15-APR-1998; 98US-0081955.
PR 21-APR-1998; 98US-0082568.
PR 21-APR-1998; 98US-0082569.
PR 22-APR-1998; 98US-0082700.
PR 22-APR-1998; 98US-0082704.
PR 22-APR-1998; 98US-0082804.
PR 23-APR-1998; 98US-0082767.
PR 23-APR-1998; 98US-0082796.
PR 27-APR-1998; 98US-0083336.
PR 28-APR-1998; 98US-0083322.
PR 29-APR-1998; 98US-0083392.
PR 29-APR-1998; 98US-0083495.
PR 29-APR-1998; 98US-0083496.
PR 29-APR-1998; 98US-0083499.
PR 29-APR-1998; 98US-0083500.
PR 29-APR-1998; 98US-0083545.
PR 29-APR-1998; 98US-0083554.
PR 29-APR-1998; 98US-0083558.
PR 29-APR-1998; 98US-0083559.
PR 30-APR-1998; 98US-0083742.
PR 05-MAY-1998; 98US-0084366.
PR 06-MAY-1998; 98US-0084414.
PR 06-MAY-1998; 98US-0084441.
PR 07-MAY-1998; 98US-0084598.
PR 07-MAY-1998; 98US-0084600.
PR 07-MAY-1998; 98US-0084627.
PR 07-MAY-1998; 98US-0084637.
PR 07-MAY-1998; 98US-0084639.
PR 07-MAY-1998; 98US-0084640.
PR 07-MAY-1998; 98US-0084643.
PR 13-MAY-1998; 98US-0085323.
PR 13-MAY-1998; 98US-0085338.
PR 13-MAY-1998; 98US-0085339.
PR 15-MAY-1998; 98US-0085573.
PR 15-MAY-1998; 98US-0085579.
PR 15-MAY-1998; 98US-0085580.
PR 15-MAY-1998; 98US-0085582.
PR 15-MAY-1998; 98US-0085689.
PR 15-MAY-1998; 98US-0085697.
PR 15-MAY-1998; 98US-0085700.
PR 15-MAY-1998; 98US-0085704.
PR 18-MAY-1998; 98US-0086023.
PR 22-MAY-1998; 98US-0086392.
PR 22-MAY-1998; 98US-0086414.
PR 22-MAY-1998; 98US-0086430.
PR 22-MAY-1998; 98US-0086486.
PR 28-MAY-1998; 98US-0087098.
PR 28-MAY-1998; 98US-0087106.
PR 28-MAY-1998; 98US-0087208.
PR 30-JUL-1998; 98US-0094651.
PR 11-SEP-1998; 98US-0100038.
XX
PA (GETH ) GENENTECH INC.
XX
PI Wood WI, Goddard A, Gurney A, Yuan J, Baker KP, Chen J;
XX
DR WPI; 1999-551358/46.
DR N-PSDB; AAZ33977.
XX
PT New secreted and transmembrane polypeptides and their polynucleotides,
PT useful for treating blood coagulation disorders, cancers and cellular
PT adhesion disorders -
XX
PS Claim 12; Fig 39; 530pp; English.
XX
CC The present invention describes secreted and transmembrane polypeptides
CC and their polynucleotides. The nucleotide sequences are useful as
CC sources of probes, primers, for chromosome mapping, and for generation
CC of antisense sequences. They can also be used to create transgenic
CC animals. The proteins can be used to treat a variety of diseases and
CC disorders, depending on their function. Diseases that may be treated
CC include blood coagulation disorders, cancers and cellular adhesion
CC disorders. They may also be used to raise antibodies. AAZ33891 to
CC AAZ34338, and AAY41685 to AAY41774 represent polynucleotide and
CC polypeptide sequence given in the exemplification of the present
CC invention.
XX
SQ Sequence 730 AA;

Query Match 41.0%; Score 1339.5; DB 20; Length 730;
Best Local Similarity 39.6%; Pred. No. 2.6e-122;
Matches 274; Conservative 111; Mismatches 218; Indels 89; Gaps 5;

```
Qy      9 LAGLLFLPLLVNLCCPYFF------------QDIGYFLKVAAVGRRVRSYGQRRPARTI 55
          :| || |||| | | |: : ::  | :|  || :
Db     48 maallllpll--lllpllllklhlwpqlrwlpadlafavralcckralr-------aral 98

Qy     56 LRA----------------FLEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHL 99
            |  | |:|  ||:  :|:: :| ||: |||  |
Db     99 aaaaadpegpeggcslawrlaelaqqraahtflihgsrrfsyseaeresnraaraflral 158

Qy    100 G-------------------------------------------------LRQGDCVA 108
          |  |  ||
Db    159 gwdwgpdggdsgegsagegeraapgagdaaagsgaefaggdgaargggaaaplspgatva 218

Qy    109 LLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEI 168
          ||:  | ::||| || | |  | :  :|  |||| : |||: |:::||  ::|
Db    219 lllpagpeflwlwfglakaglrtafvptalrrgpllhclrscgaralvlapefleslepd 278

Qy    169 LPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGT 228
          ||:|:  : ::  :: ||  | :|  |:|  |  : :  |||:||||
Db    279 lpalramglhlwaagpgthpagisdllaevsaevdgpvpgylsspqsitdtclyiftsgt 338

Qy    229 TGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLAL 288
          ||||||| |:| :|  |  : |:  :|||| || || :  |:|| ||:  |||: |
Db    339 tglpkaarishlkilqcqgfyqlcgvhqedviylalplyhmsgsllgivgcmgigatvvl 398

Qy    289 RTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQ 348
          ::|||| |||:||::: ||| |||||| ||| | |  :| |||||:|:|:|| | | :
Db    399 kskfsagqfwedcqqhrvtvfqyigelcrylvnqppskaerghkvrlavgsglrpdtwer 458

Qy    349 FVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVR 408
          ||:||| : : | |  ||||:  :|| : ||||| ::| | |  : ||:|||  ||:|
Db    459 fvrrfgplqvletygltegnvatinytgqrgavgraswlykhifpfslirydvttgepir 518

Qy    409 DENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLM 468
          |  |:|:  || |||| ::| :|| |||  : | |:|||: ||::||:||||:
Db    519 dpqghcmatspgepgllvapvsqqspflgyaggpelaqgkllkdvfrpgdvffntgdllv 578

Qy    469 VDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMAS 528
          | : |: |||| |||||||||||||||||:  :||:||||||| || |||| |||:
Db    579 cddqgflrfhdrtgdtfrwkgenvattevaevfealdflqevnvygvtvpghegragmaa 638

Qy    529 IKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVI 588
          : ::  |  |  :|: |::: || |||||||:|:::  | ||| :|: :  |||:|: :
Db    639 lvlrpphaldlmqlythvsenlppyarprflrlqeslattetfkqqkvrmanegfdpstl 698

Qy    589 KDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
          | || ||  |:|:|  |:|: |  |::
Db    699 sdplyvldqavgaylplttarysallagnlri 730
```

RESULT 11
AAB44255
ID AAB44255 standard; Protein; 730 AA.
XX
AC AAB44255;
XX
DT 08-FEB-2001 (first entry)
XX
DE Human PRO703 (UNQ367) protein sequence SEQ ID NO:102.
XX
KW Human; secreted protein; transmembrane protein; PRO; EST; cytostatic;
KW expressed sequence tag; detection; cancer.
XX

```
OS   Homo sapiens.
XX
PN   WO200053756-A2.
XX
PD   14-SEP-2000.
XX
PF   18-FEB-2000; 2000WO-US04341.
XX
PR   08-MAR-1999;   99WO-US05028.
PR   12-MAR-1999;   99US-0123957.
PR   29-MAR-1999;   99US-0126773.
PR   21-APR-1999;   99US-0130232.
PR   28-APR-1999;   99US-0131445.
PR   14-MAY-1999;   99US-0134287.
PR   23-JUN-1999;   99US-0141037.
PR   26-JUL-1999;   99US-0145698.
PR   29-OCT-1999;   99US-0162506.
PR   30-NOV-1999;   99WO-US28313.
PR   02-DEC-1999;   99WO-US28551.
PR   02-DEC-1999;   99WO-US28565.
PR   16-DEC-1999;   99WO-US30095.
PR   30-DEC-1999;   99WO-US31243.
PR   30-DEC-1999;   99WO-US31274.
PR   05-JAN-2000; 2000WO-US00219.
PR   06-JAN-2000; 2000WO-US00277.
PR   06-JAN-2000; 2000WO-US00376.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Baker KP,  Botstein D,  Desnoyers L,  Eaton DL;
PI   Ferrara N,  Filvaroff E,  Fong S,  Gao W,  Gerber H,  Gerritsen ME;
PI   Goddard A,  Godowski PJ,  Grimaldi CJ,  Gurney AL,  Hillan KJ;
PI   Kljavin IJ,  Kuo SS,  Napier MA,  Pan J,  Paoni NF,  Roy MA;
PI   Shelton DL,  Stewart TA,  Tumas D,  Williams PM,  Wood WI;
XX
DR   WPI; 2000-611443/58.
DR   N-PSDB; AAC78481.
XX
PT   Novel PRO polypeptides and polynucleotides used in detection methods,
PT   to target bioactive molecules to specific cells, and to modulate
PT   cellular activities -
XX
PS   Claim 12; Fig 39; 636pp; English.
XX
CC   AAC78458 to AAC78599 represent polynucleotide and EST (expressed
CC   sequence tag) sequences which encode secreted or transmembrane PRO
CC   polypeptides. The PRO polynucleotides and polypeptides have cytostatic
CC   activity. The polynucleotides and polypeptides can be used for detecting
CC   the presence of PRO polypeptides in samples, for linking bioactive
CC   molecules to cells and for modulating biological activities of cells,
CC   using the polypeptides for specific targeting. The polypeptide targeting
CC   can be used to kill the target cells, e.g. for the treatment of cancers.
CC   The polypeptide pairs provide specific targeting of bioactive molecules
CC   to cells. AAC78600 to AAC78987 represent PCR primers and probes used in
CC   the isolation of the PRO polynucleotide sequences.
XX
SQ   Sequence   730 AA;


  Query Match             41.0%;  Score 1339.5;  DB 21;  Length 730;
  Best Local Similarity   39.6%;  Pred. No. 2.6e-122;
  Matches  274;  Conservative  111;  Mismatches  218;  Indels   89;  Gaps    5;

Qy       9 LAGLLFLPLLVNLCCPYFF------------QDIGYFLKVAAVGRRVRSYGQRRPARTI 55
           :| || ||||  |  |                |: : ::     | :|       || :
Db      48 maallllpll--lllpllllklhlwpqlrwlpadlafavralcckralr-------aral 98

Qy      56 LRA----------------FLEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHL 99
             |                | |:|     ||:      :|:: :| ||: |||    |
Db      99 aaaaadpegpeggcslawrlaelaqqraahtflihgsrrfsyseaeresnraaraflral 158

Qy     100 G-------------------------------------------------LRQGDCVA 108
           |                                                 |  |  ||

Db     159 gwdwgpdggdsgegsagegeraapgagdaaagsgaefaggdgaargggaaaplspgatva 218

Qy     109 LLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEI 168
           ||:   | ::||| || | |   | :   :|   |||| : |||: |:::||   ::|
Db     219 lllpagpeflwlwfglakaglrtafvptalrrgpllhclrscgaralvlapefleslepd 278

Qy     169 LPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGT 228
           ||:|:   : ::     ::  ||   | :|      |:|    |  : :   |||:||||
Db     279 lpalramglhlwaagpgthpagisdllaevsaevdgpvpgylsspqsitdtclyiftsgt 338

Qy     229 TGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLAL 288
           ||||||| |:| :|    |   : |:  :||||: || || :  |:|| ||:  |||: |
Db     339 tglpkaarishlkilqcqgfyqlcgvhqedviylalplyhmsgsllgivgcmgigatvvl 398

Qy     289 RTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQ 348
           ::|||| |||:||::: ||| |||||| ||| | |    :| ||||||:|:||| | | :
Db     399 kskfsagqfwedcqqhrvtvfqyigelcrylvnqppskaerghkvrlavgsglrpdtwer 458

Qy     349 FVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVR 408
           ||:||| : : | |  ||||:' :||  : ||||| ::| | |  : ||:|||   ||:|
Db     459 fvrrfgplqvletygltegnvatinytgqrgavgraswlykhifpfslirydvttgepir 518

Qy     409 DENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLM 468
           |  |:|:    || |||| ::| :|| ||||     : | |:|||: ||::||:||||:
Db     519 dpqghcmatspgepgllvapvsqqspflgyaggpelaqgkllkdvfrpgdvffntgdllv 578

Qy     469 VDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMAS 528
           | : |: |||| |||||||||||||||:    :||:|||||||| || |||| |||:
Db     579 cddqgflrfhdrtgdtfrwkgenvattevaevfealdflqevnvygvtvpghegragmaa 638

Qy     529 IKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVI 588
           : ::  |  |  :|: |::: || ||||||||:|:::  | ||| :|: :  |||:|: :
Db     639 lvlrpphaldlmqlythvsenlppyarprflrlqeslattetfkqqkvrmanegfdpstl 698

Qy     589 KDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
           | || ||     |:|:|   |:|: |  |::
Db     699 sdplyvldqavgaylplttarysallagnlri 730


RESULT  12
AAB24054
ID   AAB24054 standard; Protein; 730 AA.
XX
AC   AAB24054;
XX
DT   25-JAN-2001  (first entry)
XX
DE   Human PRO703 protein sequence SEQ ID NO:29.
XX
KW   Human; tumour; diagnosis; neoplastic disease; identification; cancer;
KW   tumourigenesis; detection; neoplastic cell growth; proliferation;
KW   cytostatic; antiinflammatory; immunomodulatory; inflammatory disorder;
KW   immunological disorder.
XX
OS   Homo sapiens.
XX
PN   WO200053754-A1.
XX
PD   14-SEP-2000.
XX
PF   06-JAN-2000; 2000WO-US00277.
XX
PR   08-MAR-1999;   99WO-US05028.
PR   12-MAR-1999;   99US-0123957.
PR   29-MAR-1999;   99US-0126773.
PR   21-APR-1999;   99US-0130232.
PR   28-APR-1999;   99US-0131445.
PR   05-OCT-1999;   99WO-US23089.
PR   30-NOV-1999;   99WO-US28313.
PR   02-DEC-1999;   99WO-US28551.
PR   02-DEC-1999;   99WO-US28564.
PR   30-DEC-1999;   99WO-US31243.
PR   30-DEC-1999;   99WO-US31274.
```

```
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Desauvage FJ,  Goddard A,  Gurney AL,  Klein RD,  Roy MA;
PI   Wood WI;
XX
DR   WPI; 2000-572269/53.
DR   N-PSDB; AAC58239.
XX
PT   New isolated antibody for use in compositions and methods for the
PT   diagnosis and treatment of neoplastic cell growth and proliferation in
PT   mammals, including humans, and in monitoring tumor treatment -
XX
PS   Claim 61; Fig 29; 195pp; English.
XX
CC   The present invention describes an isolated antibody (Ab) that binds to
CC   one of the human proteins (P) designated PRO213, PRO1330, PRO1449,
CC   PRO237, PRO324, PRO351, PRO362, PRO615, PRO531, PRO538, PRO3664, PRO618,
CC   PRO772, PRO703, PRO792 or PRO474. The Ab can be used in compositions
CC   and methods for the diagnosis and treatment of neoplastic cell growth
CC   and proliferation in mammals, including humans. Genes and polypeptides
CC   encoded by them, that are amplified in the genome of a tumour cell, can
CC   be identified and are useful targets for the treatment and prevention of
CC   certain cancers and may be used to monitor tumour treatment. Compounds
CC   that inhibit the expression or activity of the identified polypeptides
CC   can be identified and used as antagonists. Benign or malignant tumours,
CC   inflammatory disorders and immunological disorders can be treated.
CC   AAC58123 to AAC58224 represent hybridisation probes and PCR primers used
CC   in the isolation of the human PRO sequences. AAC58225 to AAC58241 and
CC   AAB24041 to AAB24056 represent human PRO polynucleotide and protein
CC   sequences given in the exemplification of the present invention.
XX
SQ   Sequence   730 AA;

  Query Match             41.0%;  Score 1339.5;  DB 21;  Length 730;
  Best Local Similarity   39.6%;  Pred. No. 2.6e-122;
  Matches  274;  Conservative  111;  Mismatches  218;  Indels   89;  Gaps    5;

Qy       9 LAGLLFLPLLVNLCCPYFF------------QDIGYFLKVAAVGRRVRSYGQRRPARTI 55
           :| || ||||  |  |                |: : ::     | :|       || :
Db      48 maallllpll--lllpllllklhlwpqlrwlpadlafavralcckralr-------aral 98

Qy      56 LRA---------------FLEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHL 99
             |                 | |:|     ||:      :|:: :| ||: |||    |
Db      99 aaaaadpegpeggcslawrlaelaqqraahtflihgsrrfsyseaeresnraaraflral 158

Qy     100 G-------------------------------------------------LRQGDCVA 108
           |                                                 |  |  ||
Db     159 gwdwgpdggdsgegsagegeraapgagdaaagsgaefaggdgaargggaaaplspgatva 218

Qy     109 LLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEI 168
           ||:   | ::||| || | |   | :   :|   |||| : |||: |:::||   ::|
Db     219 lllpagpeflwlwfglakaglrtafvptalrrgpllhclrscgaralvlapefleslepd 278

Qy     169 LPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGT 228
           ||:|:   : ::     ::  ||   | :|      |:|    |  : :   |||:||||
Db     279 lpalramglhlwaagpgthpagisdllaevsaevdgpvpgylsspqsitdtclyiftsgt 338

Qy     229 TGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLAL 288
           ||||||| |:| :|    |   : |:  :||||: || || :  |:|| ||:  |||: |
Db     339 tglpkaarishlkilqcqgfyqlcgvhqedviylalplyhmsgsllgivgcmgigatvvl 398

Qy     289 RTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQ 348
           ::|||| |||:||::: ||| |||||| ||| | |    :| |||||:|:||| | | :
Db     399 kskfsagqfwedcqqhrvtvfqyigelcrylvnqppskaerghkvrlavgsglrpdtwer 458

Qy     349 FVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVR 408
           ||:||| : : | |  ||||:  :||  : |||||  ::| | |  : ||:|||   ||:|
Db     459 fvrrfgplqvletygltegnvatinytgqrgavgraswlykhifpfslirydvttgepir 518

Qy     409 DENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLM 468
           |  |:|:    || ||||  ::| :|| ||||     : | |:|||: ||::||:||||:

Db     519 dpqghcmatspgepgllvapvsqqspflgyaggpelaqgkllkdvfrpgdvffntgdllv 578

Qy     469 VDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMAS 528
             | : |: |||| |||||||||||||||||:    :|||:|||||||| || |||| |||:
Db     579 cddqgflrfhdrtgdtfrwkgenvattevaevfealdflqevnvygvtvpghegragmaa 638

Qy     529 IKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVI 588
           : ::  |  |  :|: |::: || |||||||||:|:::  | ||| :|: :  |||:|: :
Db     639 lvlrpphaldlmqlythvsenlppyarprflrlqeslattetfkqqkvrmanegfdpstl 698

Qy     589 KDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
             | || ||     |:|:|   |:|: |  |::
Db     699 sdplyvldqavgaylplttarysallagnlri 730


RESULT  13
AAB60388
ID   AAB60388 standard; Protein; 730 AA.
XX
AC   AAB60388;
XX
DT   24-APR-2001  (first entry)
XX
DE   Human fatty acid transporter PSEC67.
XX
KW   Human; fatty acid transporter; PSEC67; long-chain fatty acid uptake;
KW   oleic acid; drug screening; gene therapy; metabolic disorder;
KW   cardiomyopathy; skeletal muscle disorders; renal failure.
XX
OS   Homo sapiens.
XX
PN   WO200104301-A1.
XX
PD   18-JAN-2001.
XX
PF   07-JUL-2000; 2000WO-JP04549.
XX
PR   08-JUL-1999;   99JP-0194179.
PR   18-OCT-1999;   99US-0159586.
PR   25-APR-2000; 2000JP-0128993.
XX
PA   (HELI-) HELIX RES INST.
XX
PI   Morikawa N,  Masuho Y,  Ota T,  Isogai T,  Nishikawa T,  Kawai Y;
XX
DR   WPI; 2001-138349/14.
DR   N-PSDB; AAF27417.
XX
PT   Fatty acid transporter protein and encoded gene PSEC67 cloned from
PT   human cDNA library, with activity of oleic acid incorporation, useful
PT   as target molecule of preventives or remedies of fatty-acid metabolic
PT   disorders -
XX
PS   Claim 1; Page 48-51; 58pp; Japanese.
XX
CC   The invention relates to a novel human fatty acid transporter,
CC   PSEC67 (AAB60388), and to cDNA encoding it (AAF27417). PSEC67 is
CC   responsible for the uptake of oleic acid into cells. The invention
CC   also relates to vectors and host cells comprising a PSEC67
CC   nucleic acid; the recombinant production of PSEC67; an antibody
CC   against PSEC67; methods of screening for compounds which can regulate
CC   the uptake of long-chain fatty acids into cells; and the compounds thus
CC   identified. The PSEC67 protein and the gene encoding it are useful as
CC   targets for the treatment or prevention of diseases associated with
CC   defective metabolism of long-chain fatty acids. Such diseases include
CC   cardiomyopathy, skeletal muscle disorders, or renal failure. PSEC67
CC   nucleic acids may also be used in gene therapy for such disorders.
CC   The present sequence represents PSEC67.
XX
SQ   Sequence   730 AA;

  Query Match             41.0%;  Score 1339.5;  DB 22;  Length 730;
```

```
  Best Local Similarity   39.6%;  Pred. No. 2.6e-122;
  Matches  274;  Conservative  111;  Mismatches  218;  Indels   89;  Gaps    5;

Qy       9 LAGLLFLPLLVNLCCPYFF-------------QDIGYFLKVAAVGRRVRSYGQRRPARTI 55
           :| || ||||  |  |                 |: : ::     | :|       || :
Db      48 maallllpll--lllpllllklhlwpqlrwlpadlafavralcckralr-------aral 98

Qy      56 LRA----------------FLEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHL 99
             |                 | |:|     ||:      :|:: :| ||: |||    |
Db      99 aaaaadpegpeggcslawrlaelaqqraahtflihgsrrfsyseaeresnraaraflral 158

Qy     100 G-------------------------------------------------LRQGDCVA 108
           |                                                 |  |  ||
Db     159 gwdwgpdggdsgegsagegeraapgagdaaagsgaefaggdgaargggaaaplspgatva 218

Qy     109 LLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVEEI 168
           ||:   | ::||| || | |   | :   :|   |||| : |||: |:::||   ::|
Db     219 lllpagpeflwlwfglakaglrtafvptalrrgpllhclrscgaralvlapefleslepd 278

Qy     169 LPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTSGT 228
           ||:|:   : ::     ::  ||   | :|      |:|    |  : :   |||:||||
Db     279 lpalramglhlwaagpgthpagisdllaevsaevdgpvpgylsspqsitdtclyiftsgt 338

Qy     229 TGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLAL 288
           ||||||| |:| :|    |  : |:  :|||| || || :  |:|| ||:  |||: |
Db     339 tglpkaarishlkilqcqgfyqlcgvhqedviylalplyhmsgsllgivgcmgigatvvl 398

Qy     289 RTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQ 348
           ::|||| |||:||::: ||| |||||| ||| | |    :| ||||||:|:||| | | :
Db     399 kskfsagqfwedcqqhrvtvfqyigelcrylvnqppskaerghkvrlavgsglrpdtwer 458

Qy     349 FVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVR 408
           ||:||| : : | |  ||||:  :||  : ||||| ::| | |  : ||:|||   ||:|
Db     459 fvrrfgplqvletygltegnvatinytgqrgavgraswlykhifpfslirydvttgepir 518

Qy     409 DENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDLLM 468
           |  |:|:    || ||||  ::| :|| ||||     : | |:|||: ||::||:||||:
Db     519 dpqghcmatspgepgllvapvsqqspflgyaggpelaqgkllkdvfrpgdvffntgdllv 578

Qy     469 VDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGMAS 528
           | : |: |||| ||||||||||||||||:    :||:||||||| || |||| |||:
Db     579 cddqgflrfhdrtgdtfrwkgenvattevaevfealdflqevnvygvtvpghegragmaa 638

Qy     529 IKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPAVI 588
           : ::  |  |  :|: |::: || |||||||:|:::  | ||| :|: :  |||:|: :
Db     639 lvlrpphaldlmqlythvsenlppyarprflrlqeslattetfkqqkvrmanegfdpstl 698

Qy     589 KDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
           | || ||     |:|:|   |:|: |  |::
Db     699 sdplyvldqavgaylplttarysallagnlri 730


RESULT  14
AAY14969
ID   AAY14969 standard; protein; 702 AA.
XX
AC   AAY14969;
XX
DT   26-OCT-1999  (first entry)
XX
DE   Amino acid sequence of human hsFATP5 gene.
XX
KW   Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
KW   fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS   Homo sapiens.
XX
PN   WO9936537-A2.
XX
PD   22-JUL-1999.
XX
PF   14-JAN-1999;   99WO-US00182.
XX
PR   14-JAN-1999;   99US-0232201.
PR   15-JAN-1998;   98US-0071374.
PR   20-JUL-1998;   98US-0093491.
PR   04-DEC-1998;   98US-0110941.
PR   14-JAN-1999;   99US-0232195.
PR   14-JAN-1999;   99US-0232197.
PR   14-JAN-1999;   99US-0232200.
XX
PA   (MILL-) MILLENNIUM PHARM INC.
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI   Gimeno RE,  Hirsch DJ,  Lodish HF,  Stahl A,  Tartaglia LA;
XX
DR   WPI; 1999-444398/37.
DR   N-PSDB; AAZ00379.
XX
PT   Fatty acid transport proteins and related polynucleotides, useful
PT   for treating obesity, diabetes and heart disease
XX
PS   Claim 30; Fig 94A-B; 255pp; English.
XX
CC   The invention provides a family of fatty acid transport proteins (FATPs)
CC   that mediate transport of long chain fatty acids (LCFAs) across cell
CC   membranes into cells. Human and murine FATP proteins and nucleic acids
CC   encoding the proteins are provided. The FATP proteins can be produced
CC   by standard recombinant methodology. Fatty acid uptake by cells can be
CC   modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC   In particular, antisense oligonucleotides can be used to modulate FATP
CC   biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC   uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC   muscle or liver by administration of a complex of the agent and a FATP6
CC   binding moiety. DNA encoding FATP proteins can be used as a reference
CC   used in detecting variant alleles or homologues. Altering the LCFA uptake
CC   by administering an inhibitor or enhancer of FATP transport function in
CC   the small intestine can decrease or increase calories available as fats,
CC   and can decrease or increase circulating fatty acids. Blocking the
CC   function of FATP4 and also FATP2, is useful for treating obesity,
CC   diabetes and heart disease.
XX
SQ   Sequence   702 AA;


  Query Match             40.9%;  Score 1338.5;  DB 20;  Length 702;
  Best Local Similarity   39.5%;  Pred. No. 3.1e-122;
  Matches  274;  Conservative  111;  Mismatches  218;  Indels   91;  Gaps    5;

Qy       9 LAGLLFLPLLVNLCCPYFF-------------QDIGYFLKVAAVGRRVRSYGQRRPART 54
           :| || ||||  |  |                 |: : ::     | :|       ||
Db      18 maallllpll--lllpllllklhlwpqlrwlpadlafavralcckralr-------ara 68

Qy      55 ILRA----------------FLEKARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDH 98
           :  |                 | |:|     ||:      :|:: :| ||: |||
Db      69 laaaaadpegpeggcslawrlaelaqqraahtflihgsrrfsyseaeresnraaraflra 128

Qy      99 LG-------------------------------------------------LRQGDC 106
           ||                                                 |  |
Db     129 lgwdwgpdggdsgegsagegeraapgagdaaagsgaefaggdgaargggepaaplspgat 188

Qy     107 VALLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCFQCCGAKVLLVSPELQAAVE 166
           ||||:   | ::||| || | |   | :   :|   |||| : |||: |:::||   ::|
Db     189 valllpagpeflwlwfglakaglrtafvptalrrgpllhclrscgaralvlapeflesle 248

Qy     167 EILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYTS 226
             ||:|:   : ::     ::  ||   | :|      |:|    |  : :   |||:||
Db     249 pdlpalramglhlwaagpgthpagisdllaevsaevdgpvpgylsspqsitdtclyifts 308

Qy     227 GTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATL 286
           |||||||||| |:| :|    |   : |:  :||||: || || :  |:|| ||:  |||:
Db     309 gttglpkaarishlkilqcqgfyqlcgvhqedviylalplyhmsgsllgivgcmgigatv 368

Qy     287 ALRTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVW 346
           |::|||| |||:||::: ||| |||||| ||| | |    :| ||||||:|:||| | |
Db     369 vlkskfsagqfwedcqqhrvtvfqyigelcrylvnqppskaerghkvrlavgsglrpdtw 428
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Qy    347 RQFVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYLQKKIITYDLIKYDVEKDEP 406
          :||:||| : : | |  ||||:  :||  : ||||| ::| | |  : ||:|||   ||
Db    429 erfvrrfgplqvletygltegnvatinytgqrgavgraswlykhifpfslirydvttgep 488

Qy    407 VRDENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKLRDVFKKGDLYFNSGDL 466
          :||  |:|:    || ||||  ::| :|| ||||     : | |:|||: ||::||:|||
Db    489 irdpqghcmatspgepgllvapvsqqspflgyaggpelaqgkllkdvfrpgdvffntgdl 548

Qy    467 LMVDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIGM 526
          |: | : |: |||| ||||||||||||||||:    :||:|||||||| || |||| ||
Db    549 lvcddqgflrfhdrtgdtfrwkgenvattevaevfealdflqevnvygvtvpghegragm 608

Qy    527 ASIKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEITGTFKHRKMTLVEEGFNPA 586
          |:: ::  |  |  :|: |::: || ||||||||:|:::  | ||| :|: :  |||:|:
Db    609 aalvlrpphaldlmqlythvsenlppyarprflrlqeslattetfkqqkvrmanegfdps 668

Qy    587 VIKDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
          : | || ||     |:|:|   |:|: |  |::
Db    669 tlsdplyvldqavgaylplttarysallagnlri 702
```

RESULT 15
AAY14957
ID AAY14957 standard; protein; 609 AA.
XX
AC AAY14957;
XX
DT 26-OCT-1999 (first entry)
XX
DE Amino acid sequence of murine mmFATP3.
XX
KW Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine;
KW fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
XX
OS Mus sp.
XX
PN WO9936537-A2.
XX
PD 22-JUL-1999.
XX
PF 14-JAN-1999; 99WO-US00182.
XX
PR 14-JAN-1999; 99US-0232201.
PR 15-JAN-1998; 98US-0071374.
PR 20-JUL-1998; 98US-0093491.
PR 04-DEC-1998; 98US-0110941.
PR 14-JAN-1999; 99US-0232195.
PR 14-JAN-1999; 99US-0232197.
PR 14-JAN-1999; 99US-0232200.
XX
PA (MILL-) MILLENNIUM PHARM INC.
PA (WHED ) WHITEHEAD INST BIOMEDICAL RES.
XX
PI Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
XX
DR WPI; 1999-444398/37.
DR N-PSDB; AAZ00367.
XX
PT Fatty acid transport proteins and related polynucleotides, useful
PT for treating obesity, diabetes and heart disease
XX
PS Example 1; Fig 67; 255pp; English.
XX
CC The invention provides a family of fatty acid transport proteins (FATPs)
CC that mediate transport of long chain fatty acids (LCFAs) across cell
CC membranes into cells. Human and murine FATP proteins and nucleic acids
CC encoding the proteins are provided. The FATP proteins can be produced
CC by standard recombinant methodology. Fatty acid uptake by cells can be
CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC In particular, antisense oligonucleotides can be used to modulate FATP
CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC muscle or liver by administration of a complex of the agent and a FATP6
CC binding moiety. DNA encoding FATP proteins can be used as a reference
CC used in detecting variant alleles or homologues. Altering the LCFA uptake
CC by administering an inhibitor or enhancer of FATP transport function in
CC the small intestine can decrease or increase calories available as fats,
CC and can decrease or increase circulating fatty acids. Blocking the
CC function of FATP4 and also FATP2, is useful for treating obesity,
CC diabetes and heart disease.
XX
SQ Sequence 609 AA;

Query Match 40.6%; Score 1327.5; DB 20; Length 609;
Best Local Similarity 43.0%; Pred. No. 2.9e-121;
Matches 255; Conservative 107; Mismatches 196; Indels 35; Gaps 1;

```
Qy     63 ARQTPHKPFLLFRDETLTYAQVDRRSNQVARALHDHLG---------------------- 100
          ||: |   ||:   :  :|||: :| ||::|||     |
Db     17 areqpthtflihgaqrfsyaeaeresnriaraflrargwtggrrgsgrgsteegarvapp 76

Qy    101 -------------LRQGDCVALLMGNEPAYVWLWLGLVKLGCAMACLNYNIRAKSLLHCF 147
                       |  |  ||||:   | ::|:| || | |   | :   :|   ||||
Db     77 agdaaargttapplapgatvalllpagpdflwiwfglakaglrtafvptalrrgpllhcl 136

Qy    148 QCCGAKVLLVSPELQAAVEEILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIP 207
          : |||  |::: |   ::|  ||:|:   : ::     :|  || : | :  :   ||:|
Db    137 rscgasalvlatefleslepdlpalramglhlwatgpetnvagisnllseaadqvdepvp 196

Qy    208 ESWRSEVTFSTPALYIYTSGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFY 267
              :        |||:|||||||||||| |:| ::    |   : |:  :||||: || |
Db    197 gylsapqnimdtclyiftsgttglpkaarishlkvlqcqgfyhlcgvhqedviylalply 256

Qy    268 HSAALLIGIHGCIVAGATLALRTKFSASQFWDDCRKYNVTVIQYIGELLRYLCNSPQKPN 327
          | :  |:|| ||:  |||: |: ||||||||||||:|: ||| |||||| ||| | |
Db    257 hmsgsllgivgclgigatvvlkpkfsasqfwddcqkhrvtvfqyigelcrylvnqppska 316

Qy    328 DRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYARKVGAVGRVNYL 387
          : |||||||:|:||| | | :|::||| : | | |  ||||:   ||  : ||||| ::|
Db    317 efdhkvrlavgsglrpdtwerflrrfgplqiletygmtegnvatfnytgrqgavgraswl 376

Qy    388 QKKIITYDLIKYDVEKDEPVRDENGYCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEK 447
          | |  : ||:|||   ||:|:  |:|:    || ||||  ::| :|| |||||    :
Db    377 ykhifpfslirydvmtgepirnaqghcmttspgepgllvapvsqqspflgyagapelakd 436

Qy    448 KKLRDVFKKGDLYFNSGDLLMVDHENFIYFHDRVGDTFRWKGENVATTEVADTVGLVDFV 507
          | |:|||  ||::||:||||: | : |::|||| ||| ||||||||||||||: :  :||:
Db    437 kllkdvfwsgdvffntgdllvcdeqgflhfhdrtgdtirwkgenvattevaevletldfl 496

Qy    508 QEVNVYGVHVPDHEGRIGMASIKMKENHEFDGKKLFQHIADYLPSYARPRFLRIQDTIEI 567
          ||||:||| || |||| |||:: ::     :  :|: |::: || ||||||||:|:::
Db    497 qevniygvtvpghegragmaalalrppqalnlvqlyshvsenlppyarprflrlqeslat 556

Qy    568 TGTFKHRKMTLVEEGFNPAVIKDALYFLDDTAKMYVPMTEDIYNAISAKTLKL 620
          | ||| :|: :  |||:|:|: | || ||     |:|:|   |:|: :  |::
Db    557 tetfkqqkvrmanegfdpsvlsdplyvldqdigaylpltparysallsgdlri 609
```

Search completed: July 16, 2001, 18:12:47
Job time: 127 sec